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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/799,437	03/12/2004	Jorg-Reinhardt Kropp	16274.9a.1	6223

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EXAMINER	
CHIEM, DINH D	

ART UNIT	PAPER NUMBER
2883	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/799,437	KROPP, JORG-REINHARDT	
	Examiner	Art Unit	
	ERIN D. CHIEM	2883	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 March 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13 and 15-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8,10-13 and 15-26* is/are rejected.

7)☒ Claim(s) *9* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

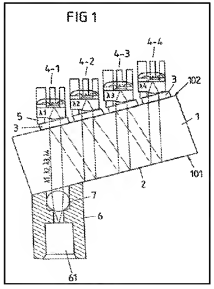
1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This office action is in response to the request for continued examination filed on March 10, 2009. Claim 14 is canceled, and currently claims 1-13 and 15-26 are pending. The rejection to claims 1 and 23 under 35 U.S.C. 112, first paragraph is now withdrawn in view of the amendment to the claims. In view of the amendments, the examiner reconsidered the claimed invention with newly found prior art of Chen et al. (US 6,870,976 B2). The new rejection is provided herein below.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, **the spacers are connected to one another with a defined spacing and form a placement part that is space onto the second surface of the multiplex body** must be shown or the feature(s) canceled from the claim(s). No new matter should be entered



According to the specification on pages 4-5 and paragraph [0014] wherein the spacers are connected to one another with a defined and the spacers form a placement part that can be placed onto one surface of the multiplex body. The spacers thus form a type of comb or web. Figure 1 does not clearly show this feature as claimed since according to Figure 1, the spacers are not connected to one another.

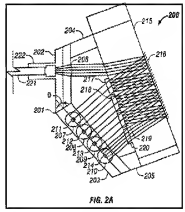
Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

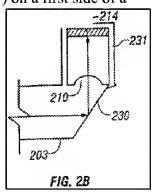
The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-4, 10-13 and 15-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Chen et al.(US 6,870,976 B2). In terms of claim 1, Chen discloses an apparatus for multiplexing and/or demultiplexing optical signals having a plurality of wavelengths, the apparatus comprising:



- a multiplex body having a first and second parallel surfaces between which light is reflected back and forth and coupled in or out in a wavelength-dependent manner (215);
- a first subassembly including a first optoelectronic transducer (214) on a first side of a first substrate and an associated optical system having a first lens (210) in a second side of the first substrate; and
- a second subassembly including a second optoelectronic transducer on a first side of a second substrate and an associated optical system having a second lens in a second side of the second substrate.



Regarding the plurality of subassembly, Fig. 2A shows how the multiple subassemblies are structured on the glass substrate (215).

Regarding claim 2, the parallel pencil beams are shown in Fig. 2A.

Regarding claim 3, Chen discloses connecting the subassembly to the multiplex body with an epoxy or fluid. (Col. 6, lines 14-25).

Regarding claim 4, the portion that is between element 204 and 205 wherein the angular block is Chen's means for providing an angular orientation of the optical path of each subassembly with respect to the second surface of the multiplex body.

Regarding claims 10 and 12, the apparatus further comprising wavelength selective filters, each wavelength selective filter (215).

Regarding claim 13, the reflection layer is shown as element 216.

Regarding claim 17, Chen discloses the barrel may be sealed by securing a covering over the barrel (222). See col. 6, lines 18-26.

Regarding claim 21, Chen teaches in column 5 and column 6 how the apparatus could be modified such that it would operate as a multiplexer or a demultiplexer. In this instant, when an optical waveguide is utilized, the device performs as a demultiplexer and operates cooperatively with a filter.

In terms of claim 23, the optical multiplexing/demultiplexing apparatus comprising:

a monolithic transparent body (Fig. 2A, '215') having first and second parallel surfaces, each of the first and second surfaces being at least partially reflective (see the zigzag pattern of the light beams);

a first subassembly mounted (211) adjacent to the second surface of the monolithic transparent body and including a first optoelectronic transducer supported by a first side of a first substrate, wherein a first lens (207) is formed in a second side of the first substrate opposite the first side, the first lens defining an associated optical axis aligned at an oblique angle relative to the second surface;

a second subassembly (212) mounted adjacent to the second surface of the monolithic transparent body and including a second optoelectronic transducer supported by a first side of a second substrate, wherein a second lens (208) is formed in a second side of the second substrate opposite the first side~ the second lens defining an associated optical axis aligned at an oblique angle relative to the second surface; and

first and second wavelength-selective filters (217-218) mounted between the second surface and a corresponding one of the first and second subassemblies.

In terms of claim 24, Chen discloses an optical multiplexing/demultiplexing apparatus comprising:

a monolithic transparent body (215) having first and second parallel surfaces, each of the first and second surfaces being at least partially reflective;

a coupling assembly (the substrate between (204-205) mounted to the first surface of the monolithic transparent body, the coupling assembly defining a first optical axis aligned at an oblique angle relative to the first surface;

a first subassembly (211) mounted adjacent to the second surface of the monolithic transparent body and including a first optoelectronic transducer supported by a first substrate, the first subassembly further including a first optical system (203), the first optical system defining a

second optical axis that is aligned at the oblique angle relative to the second surface~ the first optical system comprising a first lens formed on or in the first substrate;

a second subassembly (212) mounted adjacent to the second surface of the monolithic transparent body and including a second optoelectronic transducer supported by a second substrate, the second subassembly further including a second (203) optical system, the second optical system defining a third optical axis that is aligned at the oblique angle relative to the second surface, the second optical system comprising a second lens formed on or in the second substrate; and

first and second wavelength-selective filters (217-220) mounted between the second surface and a corresponding one of the first and second subassemblies, the first and second wavelength-selective filters being positioned along the second surface such that a light beam pencil directed along the first optical axis is reflected between the first and second surfaces to each of the first and second wavelength-selective filters.

Regarding claim 25, the first and second optoelectronic transducers comprises a vertically emitting laser diode (col. 6, lines 7-13).

Regarding claim 26, at least one of the optoelectronic transducers emit directly into the substrate (See. Fig. 2A).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. in view of Nosu et al. (US 4,244,045). Chen discloses the invention of claim 1 and 4, however, Chen does not disclose each spacer is premounted between the subassembly and the multiplex body

Nosu discloses each spacer 81-86 being premounted between the multiplex. Body and the subassembly.

Since Chen and Nosu are both from the same field of endeavor, the purpose disclosed by Nosu would have been recognized in the pertinent art of Chen.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to provide individual spacers per mounting of each subassembly onto the substrate in place of the single spacer since one having ordinary skill in the art would be **motivated** to make the modification for better adjustment to the individual subassemblies.

Allowable Subject Matter

Claim 9 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments with respect to claims 1-13, 15-26 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erin D. Chiem whose telephone number is (571) 272-3102. The examiner can normally be reached on Monday - Thursday 9AM - 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on (571) 272-2415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Erin D Chiem/
Examiner, Art Unit 2883

/Frank G Font/
Supervisory Patent Examiner, Art Unit 2883

FGF/edc